



STANFORD RESEARCH INSTITUTE

MENLO PARK, CALIFORNIA 94025

9 February 1968

Dr. L. G. Roberts
Room 3D-169
The Pentagon
Washington, D. C. 20301

Dear Larry:

Enclosed are two copies, one for you and one for Barry, of a memorandum titled "Network Preparations," dated 2/1/68. It is tabulation (as I mentioned to Barry in my telephone call to him of February 8) of the interactions between the network contractor and the administrator of each host. Pages 1 and 2 are contractor to administrator actions, while pages 3 and 4 are actions in the other direction. This is an outgrowth of the writing that has been underway on Section V "Acceptance Tests." It could be used, I feel, to alert those sites associated with the network as to some of the tasks ahead.

I am delaying the distribution of Section V, incidentally, until about February 21st after the meeting next week with Culler and Kleinrock.

Very truly yours,

Elmer B. Shapiro
Sr. Research Engineer

EBS/ms

Enc.

330-71-A-1647
Box 1
F: H. R. H. Computer Department
Working Group

Network Preparations

Outputs and Activities of the Contractor Affecting the Host Administrator

Hardware and Physical Plant Matters

1. Space requirements and physical arrangement features for the IMP, the communication terminals, and personnel.
2. Environmental support requirements (temperature controls, a.c. power needs including plug specifications, floor strength).
3. Requirements for running interconnecting cables (lengths, diameters, and minimum bending radii of each cable; location of physical cable ports in the equipments).
4. Cost and delivery estimates of special IMP hardware.
5. Estimated dates for delivery, installation, and test of each item of equipment.

Host-IMP Interface Matters

1. Specification of electrical features of host-IMP signals (voltage and current levels, logical meaning of the levels, circuit impedances, switching times).
2. Specification of the actual assignment of signals on host-IMP cables to be used at that installation.
3. Interface and protocol specifications for the host-IMP hardware interface, and for the standard IMP-augmented IMP programs.

Programming Matters

1. Provision of an operational and documented assembler for the IMP, to be used by host personnel in writing programs to augment the standard IMP program.
2. Providing a computer system for executing these assemblies, providing access through the use of telephone dial-up terminals (at host sites) employing model 33 or 35 Teletype machines. The cost of such computer usage to be borne by the contractor.

Testing Matters

1. Provision of personnel, off-site and on-site of the host, for participation in network debugging and testing activities.
2. Reimbursement to the host administration for toll telephone charges incurred by contractor's activities at the host site.

Output and Activities of the Host Administrator Affecting the Contractor

Hardware and Physical Plant Matters

1. Provision of an adequate site for the installation of the IMP and communication terminals.
2. Preparation of the site to accommodate the required cable runs, a.c. power circuits, and temperature control.
3. Provision of physical access to the site of contractor and communication common carrier personnel for purposes of equipment installation, debugging, and test.
4. Specification of special IMP hardware needs.

Host-IMP Interface Matters

1. Design, construction, installation, and test of host hardware for use in communication with the IMP.
2. Provision of connectors at the host end, for the host-IMP cables, and the installation of those connectors on those cables.

Programming Matters

1. Write, modify and debug host programs (I/O drivers for IMP communications; communication control program for message analysis, file maintenance, access control in and out of host, etc.).
2. Write and debug IMPs programs to augment the standard IMP package, and an IMP loader (for program to be loaded from the host).
3. Write and debug host programs for use in network tests.

Testing Matters

1. Make available host resources (CPU time, storage space, programs) for IMP and network tests.
2. Provide personnel, knowledgeable in host hardware and programs, and augmented programs of IMP, for participation in tests.

3. Provide working space for contractor personnel use during testing, and for their access to that space.
4. Provide telephone communications, and a dial-up Teletype terminal (model 33 or 35).



STANFORD RESEARCH INSTITUTE

MENLO PARK, CALIFORNIA 94025

9 February 1968

Dr. L. G. Roberts
Room 3D-169
The Pentagon
Washington, D. C. 20301

Dear Larry:

Enclosed are two copies, one for you and one for Barry, of a memorandum titled "Network Preparations," dated 2/1/68. It is tabulation (as I mentioned to Barry in my telephone call to him of February 8) of the interactions between the network contractor and the administrator of each host. Pages 1 and 2 are contractor to administrator actions, while pages 3 and 4 are actions in the other direction. This is an outgrowth of the writing that has been underway on Section V "Acceptance Tests." It could be used, I feel, to alert those sites associated with the network as to some of the tasks ahead.

I am delaying the distribution of Section V, incidentally, until about February 21st after the meeting next week with Culler and Kleinrock.

Very truly yours,

A handwritten signature in dark ink, appearing to read 'Elmer B. Shapiro'.

Elmer B. Shapiro
Sr. Research Engineer

EBS/ms

Enc.

330-71-A-1647
Box 1
F: HRT/Computer/Networks
Working Group